

Title (en)
Flux-cored wire.

Title (de)
Flussmittelkerndraht.

Title (fr)
Fil à âme de flux.

Publication
EP 0590623 A1 19940406 (EN)

Application
EP 93115674 A 19930929

Priority
• JP 25908593 A 19930922
• JP 28503492 A 19920930

Abstract (en)
Disclosed is a flux cored wire for low alloy steels and high alloy steels which is excellent in arc stability and moisture absorption resistance of fume/slag. In this flux-cored wire, the flux components and the flux ratio are specified within the following ranges: namely, Na compound (Na₂O equivalent amount) + K compound (K₂O equivalent amount) (flux wt%): 1.5-6.0%; soluble Na compound (Na₂O equivalent amount) (flux wt%): 1.5% or less; soluble K compound (K₂O equivalent amount) (flux wt%): 0.8% or less; SiO₂ (flux wt%): 5-30%; TiO₂ + ZrO₂ + Al₂O₃ (flux wt%): 5-40%; flux ratio (wire wt%): 10-30%. Further, the flux components satisfy the formula of { soluble Na compound (Na₂O equivalent amount) + 0.1 x soluble K compound (K₂O equivalent amount) } / { SiO₂ + 0.5 x (TiO₂ + ZrO₂ + Al₂O₃) } : 40 x 10⁻³ or less. In addition, one or more kinds of a Li compound (Li₂O equivalent amount) and a Cs compound (Cs₂O equivalent amount) may be added in the total amount of 0.1-3.0wt% so as to satisfy the formula of {soluble Na compound (Na₂O equivalent amount) + 0.1 x soluble K compound (K₂O equivalent amount)-Li compound (Li₂O equivalent amount)-Cs compound (Cs₂O equivalent amount) } / { SiO₂ + 0.5 x (TiO₂ + ZrO₂ + Al₂O₃) } = 20 x 10⁻³ or less. <IMAGE>

IPC 1-7
B23K 35/368

IPC 8 full level
B23K 35/368 (2006.01); **B23K 35/30** (2006.01); **B23K 35/36** (2006.01)

CPC (source: EP US)
B23K 35/368 (2013.01 - EP US); **B23K 35/308** (2013.01 - EP US); **B23K 35/3607** (2013.01 - EP US); **B23K 35/3608** (2013.01 - EP US); **B23K 35/361** (2013.01 - EP US)

Citation (search report)
• [A] EP 0431904 A1 19910612 - KOBE STEEL LTD [JP]
• [A] US 5120931 A 19920609 - KOTECKI DAMIAN J [US], et al
• [A] US 4723061 A 19880202 - MUNZ ROBERT P [US], et al
• [A] GB 1056804 A 19670225 - PHILIPS ELECTRONIC ASSOCIATED
• [A] PATENT ABSTRACTS OF JAPAN vol. 14, no. 552 (M - 1056) 7 December 1990 (1990-12-07)

Cited by
KR100732242B1; EP1295672A1; AU707637B2; AU2007270341B2; US8294065B2; TWI399445B

Designated contracting state (EPC)
BE DE FR GB NL SE

DOCDB simple family (publication)
EP 0590623 A1 19940406; **EP 0590623 B1 19980812**; DE 69320287 D1 19980917; DE 69320287 T2 19990401; JP 2637907 B2 19970806; JP H06292990 A 19941021; NO 305736 B1 19990719; NO 933476 D0 19930929; NO 933476 L 19940405; US 5403377 A 19950404

DOCDB simple family (application)
EP 93115674 A 19930929; DE 69320287 T 19930929; JP 25908593 A 19930922; NO 933476 A 19930929; US 12864493 A 19930930